NIH NATIONAL CANCER INSTITUTE

OLIGODEOXYNUCLEOTIDES AS ANTI-CANCER THERAPEUTICS AND DIAGNOSTICS

SUMMARY

The National Cancer Institute Laboratory of Experimental Immunology is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize anti-cancer oligodeoxynucleotides.

REFERENCE NUMBER

E-296-2008

PRODUCT TYPE

- Diagnostics
- Therapeutics

KEYWORDS

- anti-Inflammatory, immunomodulatory
- oligodeoxynucleotide, ODN

COLLABORATION OPPORTUNITY

This invention is available for licensing and co-development.

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DESCRIPTION OF TECHNOLOGY

NCI researchers have shown that suppressive oligodeoxynucleotides (ODNs) patterned after immunomodulatory motifs present in mammalian telomeric DNA have been shown to broadly downregulate inflammatory reactions. This application claims suppressive ODN compositions and their use to prevent or delay the formation of a tumor, reduce the risk of developing a tumor, treat a tumor, prevent conversion of a benign to a malignant lesion, or prevent metastasis. Topical application of the ODNs of this invention in preclinical studies resulted in significantly fewer mice developing papillomas. These results suggest that treatment with suppressive ODN prior to tumor formation may alter the immune system and reduce host susceptibility to cancer development.

Further R&D is needed to perform dose-response studies, examine different methods of administering the suppressive ODN and the time frame for treatment, and examine the agent's utility in preventing other types of inducible tumors.

POTENTIAL COMMERCIAL APPLICATIONS

- Development of anti-cancer vaccines, therapeutics and diagnostics.

COMPETITIVE ADVANTAGES

- Novel method to prevent, diagnose, and treat a wide variety of cancers

INVENTOR(S)

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DEVELOPMENT STAGE

- Pre-clinical (in vivo)

PUBLICATIONS

Ikeuchi H, Kinjo T, Klinman DM Cancer Prev Res (Phila). 2011 May;4(5):752-7. [PMID: 21367957]

PATENT STATUS

- **U.S. Issued:** US 8,053,422 (11 August 2011) and US 8,697,666 (23 Sept. 2011)

THERAPEUTIC AREA

- Cancer/Neoplasm